ABSTRACT Phthalocyanines And Their Use In Ink-Jet Printers

A mixture of phthalocyanine dyes of Formula (1) and salts thereof:

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$$\mathsf{MPc} \underbrace{ \left(\mathsf{SO_3H} \right)_{\mathsf{x}}}_{\left(\mathsf{SO_2NR}^{1}\mathsf{R}^{2} \right)_{\mathsf{y}}} \\ \left(\mathsf{SO_2NR}^{3}\mathsf{LNR}^{4}\mathsf{R}^{5} \right)_{\mathsf{z}}$$

Formula (1)

wherein:

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M is Cu or Ni;

Pc represents a phthalocyanine nucleus of formula;

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L is optionally substituted C_{1-20} alkylene, alkyenylene or alkynylene, optionally interrupted by -O-, -NH- or -S-;

R¹, R², R³ and R⁴ independently are H or optionally substituted C₁₋₄alkyl;

R⁵ is H or an optionally substituted hydrocarbyl; or

R⁴ and R⁵ together with the nitrogen atom to which they are attached represent an optionally substituted aliphatic or aromatic ring system;

x is 0.1 to 3.8;

y is 0.1 to 3.8;

z is 0.1 to 3.8;

the sum of (x+y+z) is 4;and

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the substituents, represented by x, y and z, are attached only to a β -position on the phthalocyanine ring.

Also novel compositions and inks, ink-jet printing processes, printed images and cartridges.